

REMARKS

In the June 24, 2010 Office Action, all of pending claims 2, 4, 6, 9, 10, 12, 15 and 16 stand rejected in view of prior art. Claims 2, 4, 6, 9, 10, 12, 15 and 16 also were rejected as failing to comply with the written description requirement. No other objections or rejections were made in the Office Action.

Status of Claims and Amendments

In response to the June 24, 2010 Office Action, Applicant has cancelled claims 2, 4, 6, 9, 10, 12, 15 and 16 and added new claims 17-28 as indicated above. Thus, claims 17-28 are now pending, with claim 17 being the only independent claim. Reexamination and reconsideration of the pending claims are respectfully requested in view of above amendments and the following comments.

Claim Rejections - 35 U.S.C. §112

In paragraph 3 of the Office Action, claims 2, 4, 6, 9, 10, 12, 15 and 16 were rejected under 35 U.S.C. §112, first paragraph. In response, Applicant has cancelled claims 2, 4, 6, 9, 10, 12, 15 and 16. Thus, Applicant believes this rejection is moot as applied to these claims. However, this rejection will be discussed below with reference to new claims 17-28.

Rejections - 35 U.S.C. § 103

In paragraph 5 of the Office Action, claims 2, 4, 6, 9, 10, 12, 15 and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent Publication No. 2003-134716 (Miyawaki et al.) in view of U.S. Patent Application Publication No. 2002/0043886 (Fujita et al.). In response, Applicant has cancelled claims 2, 4, 6, 9, 10, 12, 15 and 16. Thus, Applicant believes this rejection is moot as applied to these claims. However, this rejection will be discussed below with reference to new claims 17-28.

Prior Art Citation

In the Office Action, additional prior art references were made of record. Applicant believes that these references do not render the claimed invention obvious.

New Claims

Applicant has added new claims 17-28 by the current Amendment. New claim 17 is an independent claim. New claims 18-28 are dependent claims. New independent claim 17 recites a stator of a motor comprising:

a stator core having a plurality of teeth, said plurality of teeth including at least a first tooth and a second tooth radially opposed to each other;

an insulator; and

a winding with part of the winding being wound about the first and second teeth of the stator core, with the insulator disposed between the stator core and the winding, said winding including

a first tooth winding portion and a second tooth winding portion wound about the first tooth and the second tooth, respectively,

a first neutral wire connected to an end of the first tooth winding portion,

a first lead-out wire extending from another end of the first tooth winding portion,

a crossover wire having one end connected to the first lead-out wire and extending to a position which is radially outside of the second tooth winding portion at which the crossover wire is on the second tooth winding portion,

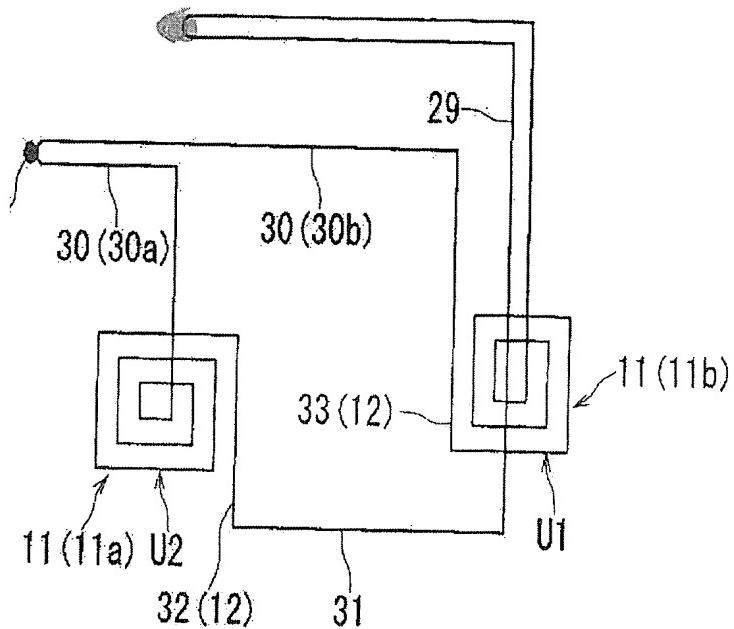
a power wire having a first portion with an end connected to another end of the crossover wire, and a second portion with an end connected to another end of the first portion and another end connected to an end of the second tooth winding portion,

a second lead-out wire extending from another end of the second tooth winding portion, and

a second neutral wire connected to the second lead-out wire,

the first neutral wire, the first tooth winding portion, the first lead-out wire, the crossover wire, the power wire, the second tooth winding portion, the second lead-out wire, and the second neutral wire defining a seamless, continuous line, and

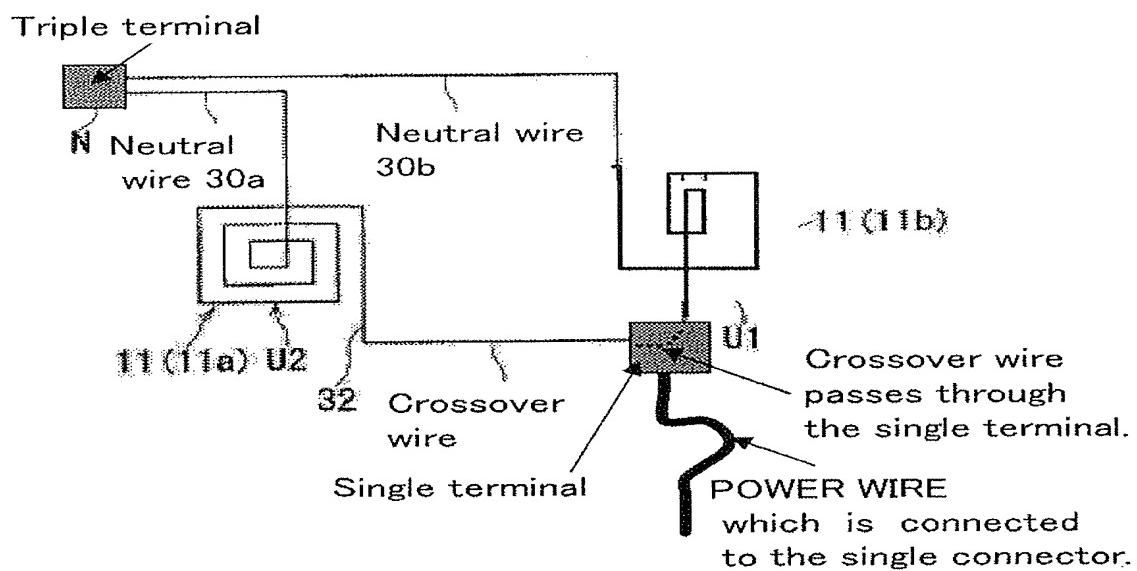
the insulator including a plurality of lead-out guide portions with each of the first and second lead-out wires being drawn out through one of the lead-out guide portions from a corresponding one of the tooth winding portions of the winding. In other words, new independent claim 17 specifies a particular arrangement of the winding. New Independent claim 17 is supported by Figures 1, 4 and 5, and paragraphs [0019], [0022], [0023] and [0030] of the specification. See Figure 5 reproduced below with location of power terminal shown thereon



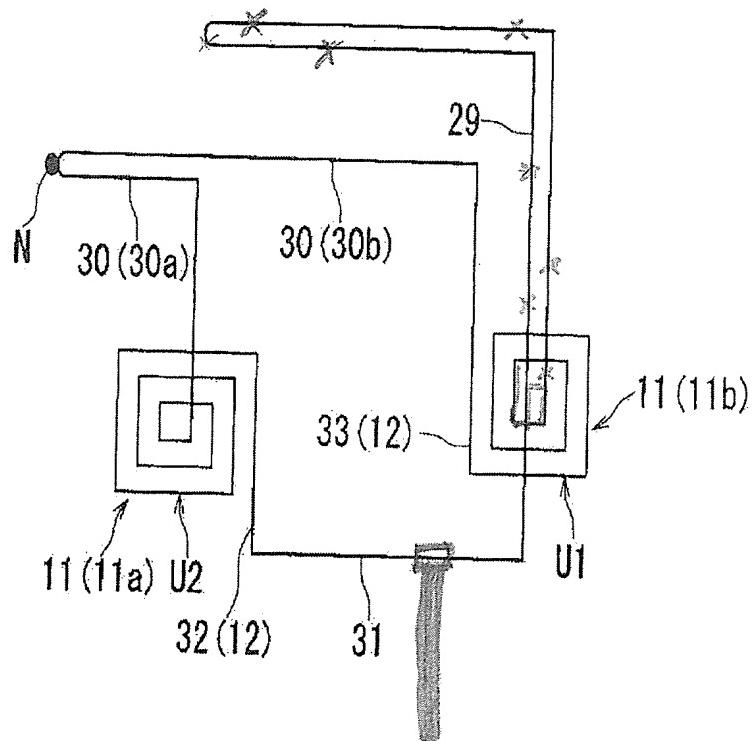
In other words, according to the present invention defined in new claim 17, a winding is structured to include **a first neutral wire, a first tooth winding portion, a first lead-out wire, a crossover wire, a power wire, a second tooth winding portion, a second lead-out wire, and a second neutral wire, which together form a seamless, continuous line.** In other words, the present invention uses a part of the seamless continuous line as a power wire, and

eliminates the need for a power wire separate from the winding. This is clearly shown in Figure 5 of the instant application, reproduced above, and understood from Figures 1, 4 and 5 and discussed paragraphs [0019], [0022], [0023] and [0030] of the specification. As readily understood by one of ordinary skill in the art from figures 1 and 4, the claimed first portion and second portion of the power wire 29 would be connected to a power source (shown shaded above) at the end of the power wire 29, although this is not specifically described in the specification. Due to the claimed structure of the winding, the winding operation is facilitated in the present invention.

In the case of connecting a separate power wire to the winding as in the structure of Miyawaki, described later, the power wire is required to be a thick wire because this wire has to feed an electric current to both the first tooth winding portion and the second tooth winding portion. The present invention does not need such a thick wire. The drawing below shows the Miyawaki publication's winding by modifying the drawing showing the winding of the present invention (i.e., the windings of the Miyawaki publication's in the same format as the present invention Figure 5).



In other words, if Figure 5 of the instant application is modified to have the arrangement of Miyawaki, the arrangement of Miyawaki would be as shown below.



The above drawings are similar (the same in principle) as the drawings presented in the previous Amendment of May 11, 2010. As apparent from comparison between these drawings, in Miyawaki, a crossover wire extending from a lead-out wire connected to a first tooth winding portion is directly connected to a second tooth winding portion. That is, Miyawaki fails to teach:

- (1) "a power wire having a first portion with an end connected to another end of the crossover wire, and a second portion with an end connected to another end of the first portion and with another end connected to an end of the second tooth winding portion".

Also, in Miyawaki, a separate power wire is connected to the crossover wire through a single terminal. Thus, Miyawaki fails to teach:

- (2) "the first neutral wire, the first tooth winding portion, the first lead-out wire, the crossover wire, the power wire, the second tooth winding portion, the second lead-out wire, and the second neutral wire define a seamless, continuous line".

Regarding (2), the Office Action acknowledges that Miyawaki lacks such an arrangement. However, the Office Action relies on Fujita (Figure 8 and paragraphs [0130] and [0131] to assert that such an arrangement (2) is obvious. However, Fujita only mentions a stator core comprising alternately would straight and turn portions 18a and 18b would be a continuous wire. Thus, Fujita makes no mention/teaching of power wire being part of a continuous line. In other words, Fujita suffers from the same deficiency as Miyawaki with respect to feature (2) above. Thus, even if combined as suggested in the Office Action, these references cannot disclose or suggest the unique arrangement of new independent claim 17.

Rejection under 35 U.S.C. §112, first paragraph

As seen from above, new independent claim 17 includes a feature similar to the one in question in the rejection of under this section of the Office Action. Applicant believes that the feature "the first neutral wire, the first tooth winding portion, the first lead-out wire, the crossover wire, the power wire, the second tooth winding portion, the second lead-out wire, and the second neutral wire define a seamless, continuous line" is at least suggested from the original specification and drawings (especially figures 4 and 5) of the application Note Figure 5 in particular, where a continuous line can be clearly seen. Also, note paragraph [0023] where the wire is discussed. Thus, Applicants respectfully traverse the rejection under 35 U.S.C. §112, first paragraph if applied to new independent claim 17.

Appl. No. 10/577,067
Amendment dated October 25, 2010
Reply to Office Action of June 24, 2010

Dependent claims

New dependent claims 18-24 correspond to canceled claims 4, 6, 9, 10, 12, 15, and 16. For new dependent claim 25, paragraphs [0024], [0027], [0029] provide support. For new claims 26-28, at least Figures 1 and 2, and paragraph [0025] provide support. New dependent claims 18-28 are believed to be allowable for the reasons discussed above with respect to new independent claim 17. Also, new dependent claims 18-28 include additional limitations, which in combination with the limitations of new independent claim 17, are not disclosed or suggested in the prior art. For example, the arrangement of the lead out guide portions aligned with circumferential edge portions of the teeth as viewed along radial directions of the lead out guide portions, the lead out guide portions have radially extending center lines that are offset from centers of slots formed between the teeth and the parts of the winding wound around the teeth, and the radially extending center lines are offset about 5 degrees from centers of slots formed between the teeth and the parts of the winding wound around the teeth, as set forth in dependent claims 26-28, respectively, are not disclosed or suggested by Miyawaki and/or Fujita. Rather, any such guide portions in these references are offset from circumferential edges of the teeth.

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In view of the foregoing amendment and comments, Applicant respectfully asserts that claims 17-28 are now in condition for allowance. Reexamination and reconsideration of the pending claims are respectfully requested.

Respectfully submitted,

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